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Type : **Contributed talk**

Off-axis GRBs and Where to Find Them

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Long-duration gamma-ray bursts (GRBs) are the most luminous explosions in the Universe, visible out to cosmological redshifts. Almost every spectroscopically confirmed supernova (SN) associated with a long GRB has been hydrogen and helium poor with broad lines (Ic-bl), indicating a stripped massive star progenitor with fast winds that produced a highly-collimated jet viewed on-axis. A critical prediction of this progenitor model is that there should be a large number of off-axis jets accompanying SNe Ic-bl - however, this has yet to be observationally confirmed. Additionally, if a GRB is observed moderately off-axis, it may result in a spectrally softer X-ray flash (XRFs), detectable with X-ray observatories such as Einstein Probe and SVOM. Radio observations of XRFs and SNe Ic-bl can reveal late rising afterglows as the jet spreads into the field of view, providing one of the best pieces of evidence for the off-axis GRB scenario. Here, I will present recent results following up several candidate off-axis GRBs, including an XRF and a sample of radio loud SNe Ic-bl. Additionally, I will lay the path forward to detecting off-axis GRBs in the era of large transient surveys.

Did you give a contributed talk at CASCA 2026?

No

If you are selected for a poster, would you be interested in giving a short flash talk on your work?

Yes

What is your career level?

Postdoctoral

Which keyword describes the area of focus of this talk?

Transients

Primary author(s) : SCHROEDER, Genevieve

Presenter(s) : SCHROEDER, Genevieve

Session Classification : Transients & Cosmology